

AMENDMENTS TO THE CLAIMS

This Listing Of Claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims:

Claim 1 (Currently Amended): A flexible Flexible substrate with a base layer (12) of plastic and at least one electrically conductive structure (20) printed with electrically conductive ink on one side of the base layer (12), ~~characterised in that~~,

the[[,]] at least one[[,]] electrically conductive structure (20) between the base layer (12) and at least one top layer (14) of plastic and each of the possible further electrically conductive structures (22) is situated between each of the two further top layers, and the base layer (12) joined to the[[,]] at least one[[,]] top layer (14) and each of the possible further top layers with neighboring ~~neighbouring~~ top layers.

Claim 2 (Currently Amended): The flexible Flexible substrate according to claim 1, ~~characterised in that~~ wherein the at least one top layer (14) exhibits at least one further electrically conductive structure (22) printed with electrically conductive ink on the at least one top layer (14), and an electrically insulating intermediate layer (18) of plastic is provided between each of the electrically conductive structures (20, 22).

Claim 3 (Currently Amended): The flexible Flexible substrate according to claim 2, ~~characterised in that~~ wherein the[[,]] at least one[[,]] top layer (14) is formed by the[[,]] at least one[[,]] further electrically conductive structure (22) of

the base layer (12) with the electrically conductive structure (20) folded at least once over itself.

Claim 4 (Currently Amended): The flexible Flexible substrate according to claim [1 or] 2, ~~characterised in that~~ wherein the substrate is rolled up.

Claim 5 (Currently Amended): The flexible Flexible substrate according to ~~one of the claims 2 to~~ claim 4, ~~characterised in that~~ wherein the electrically conductive structures (20, 22) are conductive strips that cross each other many times.

Claim 6 (Currently Amended): The flexible Flexible substrate according to ~~one of the claims 1 to~~ claim 5, ~~characterised in that~~ wherein the[[,]] at least one[[,]] electrically conductive structure (20) comprises structure parts (20_n, 20_{n-1}) that are printed one over the other and each printed structure (20_n) is set back from the edge of the underlying printed structure (20_{n-1}) forming a step.

Claim 7 (Currently Amended): The flexible Flexible substrate according to ~~one of the claims 1 to~~ claim 6, ~~characterised in that~~ wherein the base layer (12) and the[[,]] at least one[[,]] top layer (14) or in the case of further top layers, at least the top layer furthest removed from the base layer (12) each exhibits a barrier layer (16) as barrier against penetration of water vapor vapour.

Claim 8 (Currently Amended): The flexible Flexible substrate according to claim 7, ~~characterised in that~~ wherein the barrier layer (16) exhibits a layer of at least one of the materials aluminium Al₂O₃ or SiO_x with 0.9 < x < 2, in particular 1.2 < x < 1.8.

Claim 9 (Currently Amended): The flexible ~~Flexible~~ substrate according to claim 8, ~~characterised in that~~ wherein the barrier layer (16) is an aluminium ~~aluminium~~ foil which is joined to the base layer (12) and the~~[,]~~ at least one~~[,]~~ top layer (14) or in the case of further top layers at least to the top layer furthest removed from the base layer (12) and is electrically separated from the electrically conductive structure (20).

Claim 10 (Currently Amended): The flexible ~~Flexible~~ substrate according to claim 9, ~~characterised in that~~ wherein the aluminium ~~aluminium~~ foil is situated on the outside of the base layer (12) and on the outside of the top layer (14) furthest removed from the base layer (12).

Claim 11 (Currently Amended): The flexible ~~Flexible~~ substrate according to claim 8, ~~characterised in that~~ wherein the barrier layer (16) is provided in the form of a layer deposited in vacuum inside or on the outside of the base layer (12) and the top layer (14).

Claim 12 (Currently Amended): A process ~~Process~~ for continuous printing electrically conductive structures (20, 22) with an electrically conductive ink on a flexible substrate (10) of plastic, ~~characterised in that~~ wherein the substrate is printed using the gravure printing method, intaglio or rotogravure.

Claim 13 (Currently Amended): The process ~~Process~~ according to claim 12, ~~characterised in that~~ wherein the electrically conductive structures (20, 22) are printed a number of times on top of each other a number of times in order to increase the electrical conductivity.

Claim 14 (Currently Amended): The process Process according to claim 13, ~~characterised in that~~ wherein the edge of each printed structure (20_n) is set back from the edge of the underlying printed structure (20_{n-1}) thus forming a step.

Claim 15 (New): The flexible substrate according to claim 1, wherein the substrate is rolled up.

Claim 16 (New): The flexible substrate according to claim 2, wherein the electrically conductive structures (20, 22) are conductive strips that cross each other many times.

Claim 17 (New): The flexible substrate according to claim 1 wherein the at least one electrically conductive structure (20) comprises structure parts (20_n, 20_{n-1}) that are printed one over the other and each printed structure (20_n) is set back from the edge of the underlying printed structure (20_{n-1}) forming a step.

Claim 18 (New): The flexible substrate according to claim 1, wherein the base layer (12) and the at least one top layer (14) or in the case of further top layers, at least the top layer furthest removed from the base layer (12) each exhibits a barrier layer (16) as barrier against penetration of water vapor.

Claim 19 (New): The flexible substrate according to claim 18, wherein the barrier layer (16) exhibits a layer of at least one of the materials aluminium Al₂O₃ or SiO_x with 0.9 < x < 2, in particular 1.2 < x < 1.8.

Claim 20 (New): The flexible substrate according to claim 19, wherein the barrier layer (16) is an aluminium foil which is joined to the base layer (12) and the at least one top layer (14) or in the case of further top layers at least to the

top layer furthest removed from the base layer (12) and is electrically separated from the electrically conductive structure (20).

Claim 21 (New): The flexible substrate according to claim 20, wherein the aluminium foil is situated on the outside of the base layer (12) and on the outside of the top layer (14) furthest removed from the base layer (12).

Claim 22 (New): The flexible substrate according to claim 19, wherein the barrier layer (16) is provided in the form of a layer deposited in vacuum inside or on the outside of the base layer (12) and the top layer (14).